BUSINESS MODEL ANALYSIS IN KARTINIPEDIA APPLICATION USING BUSINESS MODEL CANVAS (BMC) APPROACH

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Abstract: Technological developments have had a major impact on the world of trading, especially the progress of the market which has shifted from the offline market to the digital/online market. Online media developed in the form of applications that can be downloaded via smartphones or also called e-commerce. One of those who took part in this opportunity was the Kartinipedia Application: Center for Women's Needs. Kartinipedia is a special application for women to get products and psychological needs. The research method used is descriptive qualitative analysis. Collecting data using observation and interview techniques. Based on calculations using the System Usability Scale (SUS), Kartinipedia obtained a score of 67.83, which means that the system and business model need to be improved. The purpose of this research is to identify the business model that has been implemented by the Kartinipedia application using the Business Model Canvas approach and to formulate an alternative development strategy by improving the new business model. The resulting finding is the need to change the Kartinipedia application's business model. Among them is to clarify customer segments by dividing them into five segments, namely sales, buyers, consultants and clients. The five segments have five different value propositions so that later all BMC elements will be in more detail to create new strategies in developing the company.

Keywords: *Business Model Canvas, System Usability Scale, Kartinipedia Application, E-commerce*

1. Introduction

Internet technology that has developed until now affects the course of business activities. Buying and selling of goods or services can now be done through online media. Online media developed in the form of applications that can be downloaded via smartphones or also known as e-commerce, namely using online platforms, social media, marketplaces, Google Business, etc (Dwijayanti & Pramesti, 2020). E-commerce is now used as a medium for business people to offer their products or services online so they can reach customers globally.

In recent years, more and more businesses, both large companies and retailers, have shifted or expanded to digital businesses. The number of e-commerce players continues to grow, reinforced by surveys conducted by information technology research institutions at home and abroad. One such survey conducted by a research company, Mars Indonesia, revealed that 90.5 million Indonesians are connected to the Internet. Therefore, Indonesia has the highest e-commerce growth potential in the world. The development of internet use in

Indonesia to do online shopping continues to show an increase. Based on data from the original Merchant Machine research institute British, Indonesian occupy number one in the world. Of course this is fantastic with a growth rate of 78% in 2018 (Widowati, 2019). It shows people love to do shopping on line. Most of them spend the money on shopping for clothing and footwear products feet, then the third popular one is shopping for health and beauty products. Millennials love shopping online because they think it's very simple and practical, just order the goods come right away. Goods transaction process done through a device that called E-commerce. Electronic commerce is an online application that can used to make transactions buying and selling of any product so that currently E-commerce has become a kind of online store that contains a catalog product. Consumers can view products, read product descriptions, do direct communication with the seller, make a price quote, do orders, as well as all types of transactions which used to be only possible in the world real. Now all product transactions can already be done online. (Jiwa Permana, 2019).

Electronic commerce is a concept and acts as a powerful process that has fundamentally changed people's lives today. Electronic commerce is one of the main criteria for the Information and Communication Technology revolution in the economic field (Niranjanamurthy et al., 2013). E-Commerce is emerging as a new way to help business firms compete in the marketplace. Based on this, E-Commerce has contributed to economic success. Basically e-commerce is the buying and selling of goods and services on the Internet and on different online networks, especially the World Wide Web. The development of e-commerce has caused companies to move many of their business ventures to the online environment (Ahmed et al., 2011) E-commerce has also been agreed as a powerful tool for sustainable organizational growth.

Through a press release recently citing the 2016 Economic Census data released by the Central Statistics Agency (BPS) revealed by Aulia E. Marinto, General Chairperson of the Indonesian E-Commerce Association (idEA), that the e-Commerce industry in the last ten years grew by around seven twelve percent with the total number of e-commerce businesses reaching 26.2 million units (Abdurrahman, 2017). Meanwhile, global research from Bloomberg states that more than half of Indonesia's population will be involved in e-commerce activities by 2020.

One part of e-commerce is the Marketplace, which is an electronic market that provides a place for many sellers and buyers to carry out various types of buying and selling transactions of goods or services like in an ordinary market but carried out virtually. Now the marketplace is in great demand because it is easy and convenient to use, especially for women. To achieve an attractive appearance, almost all women will spend their money to buy beauty products, fashion, and others so that women's needs are endless. Not only shopping, women also need women-only information and a comfortable space to share. The phenomenon of online shopping will grow rapidly and become an option for most people, especially women.

Previously, e-commerce was intended for all people with heterogeneous segmentation. However, Kartinipedia: Women's Needs Center is a special application for women to get products and psychological needs. Kartinipedia has a target market of women who are in the technology literate generation and like the convenience of online shopping. Including the expected quality of service, as well as features that make it easy and provide convenience for users so that they have the opportunity to get consumer loyalty. Kartinipedia was inspired by one of the female national heroes in Indonesia who came from Jepara, namely Raden Ajeng

Kartini. She is known as a pioneer in the revival of indigenous women of the archipelago. Kartinipedia is expected to be a forum for women in Indonesia to reflect the figure of R.A. Kartini. Kartinipedia also wants to be an application that can sell products as well as help women meet their psychological needs. Kartinipedia developers must have a strategy to respond to their competitors from similar platforms in an era of increasingly rapid technological development. One of them is by conducting business model analysis.

The Business Model is a hypothesis about how the company makes money in the long run: what the company will sell, and to whom, how the company will collect revenue, what technology will be used, when the company will rely on its business partners, and how to manage costs. Business Model is the whole thing that is done and designed by the company to achieve profitable results and meet the specified target consumers (Wrigley et al., 2016). One type of business model is the Business Model Canvas, which is the business model approach of an organization or company by mapping in nine aspects or components, each of which explains how the company generates revenue (Osterwalder and Pigneur 2010). The division consists of 9 interrelated business blocks, there are: (1) Customer Segments; (2) Value Proof; (3) Channels; (4) Customer Relations; (5) Income Streams; (6) Key Partners; (7) Lock Activity; (8) Key Resources; and (9) Cost Structure (Osterwalder & Pigneur, 2012). At the beginning of the launch of the Kartinipedia application, the developer has implemented the canvas business model. However, when the usability test was carried out, the developer felt the need to make improvements to the business model because this application scored below average. The Business Model Canvas approach is used to get the right business model as an improvement from the current business model that aims to achieve the company's business development goals. (Osterwalder & Pigneur, 2012).

Figure 1. Business Model Canvas (BMC).
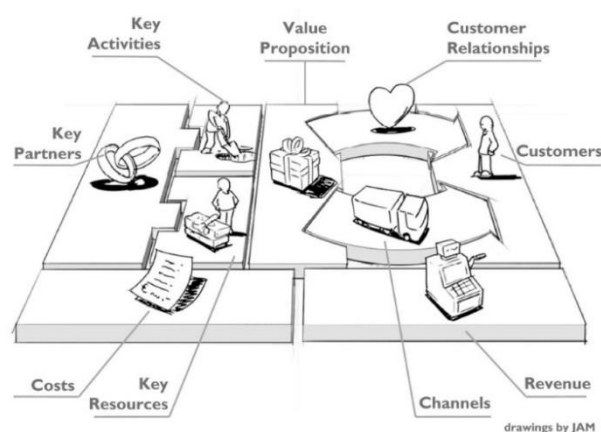
Source : Osterwalder and Pigneur 2012

Customer satisfaction in using e-commerce is one of the factors that determine whether the system functions can be used (Sivaji & Soo, 2013). The level of comfort and satisfaction using e-commerce websites from the user's side is called usability (Abdallah & Jaleel, 2015). An e-commerce website which has a usability that does not attract more customers which helps the company in increasing its business. To gain accessibility and access websites, you can use the System Usability Scale (SUS) (Hamid et al., 2020). SUS is considered a rapid

measurement method to find out how people perceive the usefulness of a computer system. The results of this test can be used as a reference or consideration for future application and business development (Brooke, 2013).

The Kartinipedia application developer has performed a system analysis using the System Usability Scale (SUS) with a SUS score of 67.83. Then assess the SUS score using the SUS score scale from Bangor. Based on research, SUS scores above 68 will be considered above average while those below 68 are said to be below average and can be considered as a system that needs to be monitored for further development (Susilo et al., 2018). Based on the SUS score obtained, the Kartinipedia application is included in the category that needs to be monitored for further development. Based on the test results obtained, the developer feels the need to improve the business model applied to the Kartinipedia application by using the business model canvas approach.

Referring to the business problems and challenges faced by the Kartinipedia application, the purpose of this research is to identify the business model that has been implemented by the Kartinipedia application using the Business Model Canvas approach and formulate an alternative development strategy by improving the new business model.

Respondent	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Total	SUS Score
Respondent 1	4	3	3	3	3	2	4	3	4	4	33	82,5
Respondent 2	2	4	3	3	2	4	3	3	4	3	31	77,5
Respondent 3	2	3	4	3	2	3	2	3	3	4	29	72,5
Respondent 4	3	3	4	4	2	2	3	3	3	4	31	77,5
Respondent 5	2	4	4	4	2	2	3	3	3	4	31	77,5
Respondent 6	2	3	3	3	2	2	3	3	4	3	28	70
Respondent 7	2	4	4	3	2	2	3	3	4	3	30	75
Respondent 8	3	3	4	3	3	2	3	3	3	3	30	75
Respondent 9	2	4	3	2	3	3	2	4	3	3	29	72,5
Respondent 10	3	3	3	2	2	3	2	4	4	3	29	72,5
Respondent 11	3	2	2	2	2	3	2	4	3	3	26	65
Respondent 12	2	3	2	2	2	3	2	4	2	2	24	60
Respondent 13	3	3	2	2	2	3	2	4	2	2	25	62,5
Respondent 14	2	3	2	3	3	2	2	4	2	2	25	62,5
Respondent 15	3	4	2	3	2	3	2	3	2	2	26	65
Respondent 16	3	4	2	2	2	3	2	3	2	2	25	62,5
Respondent 17	4	3	2	2	2	3	3	3	2	3	27	67,5
Respondent 18	2	2	3	2	2	2	2	3	3	3	24	60
Respondent 19	3	3	3	2	2	3	2	3	3	4	28	70
Respondent 20	3	3	3	3	3	3	3	3	3	3	30	75
Respondent 21	3	3	2	3	3	3	2	3	2	3	27	67,5
Respondent 22	3	3	2	3	3	3	2	3	2	2	26	65
Respondent 23	3	3	2	3	3	2	3	3	2	2	26	65
Respondent 24	2	2	2	4	3	2	3	3	2	2	25	62,5
Respondent 25	2	2	2	4	2	2	3	3	2	2	24	60
...	...	...	...	...	...	...	...	...	...	...	...	...
Respondent 100	3	3	2	3	2	3	3	3	2	2	26	65
AVERAGE SCORE												67,825

Table 1. System Usability Scale (SUS) Score

Based on research conducted by Erlyana and Hartono (2017) with the title, The business model in the marketplace industry uses the business model canvas approach: An e-commerce case study, the results obtained from the research are that the business model carried out by XYZ Online Shop excels in the customer relationship block. and still need to add key partners and main activity blocks. The Business Model Canvas and SWOT analysis explain how XYZ Online Shop creates, delivers, and captures value based on its internal and external environment.(Erlyana & Hartono, 2017).

Another study conducted by Velicia (2015) with the title Business Model Analysis And Evaluation Seafood Restaurant On The Beach With A Canvas Model Business Approach. From the results of the SWOT analysis for business model development, companies are advised to develop customer segments for young families with small children. and further enhance product innovation (Kosasi, 2015). Further research was carried out by Novi Anggraini (2020), with the title Micro Business Analysis With a Business Model Canvas (Bmc) Approach. Opportunities that can be created include the absence of competitors in the same product line in one city, making packaging more attractive, and creating a website to expand marketing. Threats that can arise include mobile customers and the presence of manufactured products outside the city that produce the latest technology and more attractive packaging.(Anggraini, 2020).
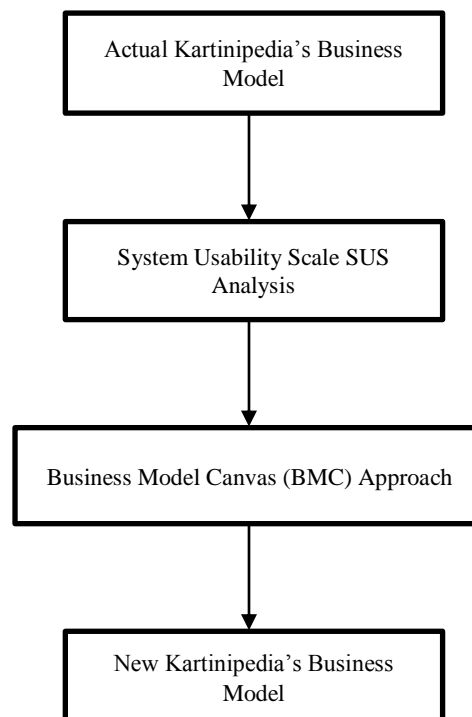
2. Research Method

Figure 2. Research Framework

Types of Research

This research uses a qualitative descriptive research type. This research leads to a qualitative description of each element of the Business Model Canvas in the Kartinipedia application.

Data and Data Source

The type of data used in this research is the type of qualitative data. The data used in this study are primary data and secondary data. Primary data is the main source of information needed to reveal the research objectives obtained from observations and direct interviews with informants. Secondary data information is obtained from supporting data such as literature, internet, scientific journals and previous research results.

Research Object

The research was conducted on the Kartinipedia E-commerce Application in 2021. The research subjects were informants who included developers and owners of the Kartinipedia application. While the object of research is the identification of the business model on the Kartinipedia application with the Business Model Canvas approach.

Data Collect Method

In determining the informants, the sampling technique used is purposive sampling. In order to get accurate data, the company knows and is involved in business activities, there are company owners and application developers.

Data Analysis Method

This study uses a descriptive qualitative data analysis process, namely by describing the nine elements of the Business Model Canvas according to Sugiyono (2013), with the following stages:

a. Data reduction

   Data reduction is done by selecting data obtained from interviews and observations, where data from interviews with informants will be selected which are considered important information.

b. Data presentation

   In qualitative research, data presentation can be done in the form of a brief description. After the data reduction stage, the data is presented containing information about the business model canvas on the Kartinipedia application.

c. Conclusion

   The data that has been presented is then described so that a conclusion can be drawn from the data. At the conclusion drawing stage, a comparison will be made between the business model canvas that has been applied to the Kartinipedia application and the business model canvas that has been refined. The conclusion of this research is the formulation of an alternative business model canvas that is suitable for the Kartinipedia application.

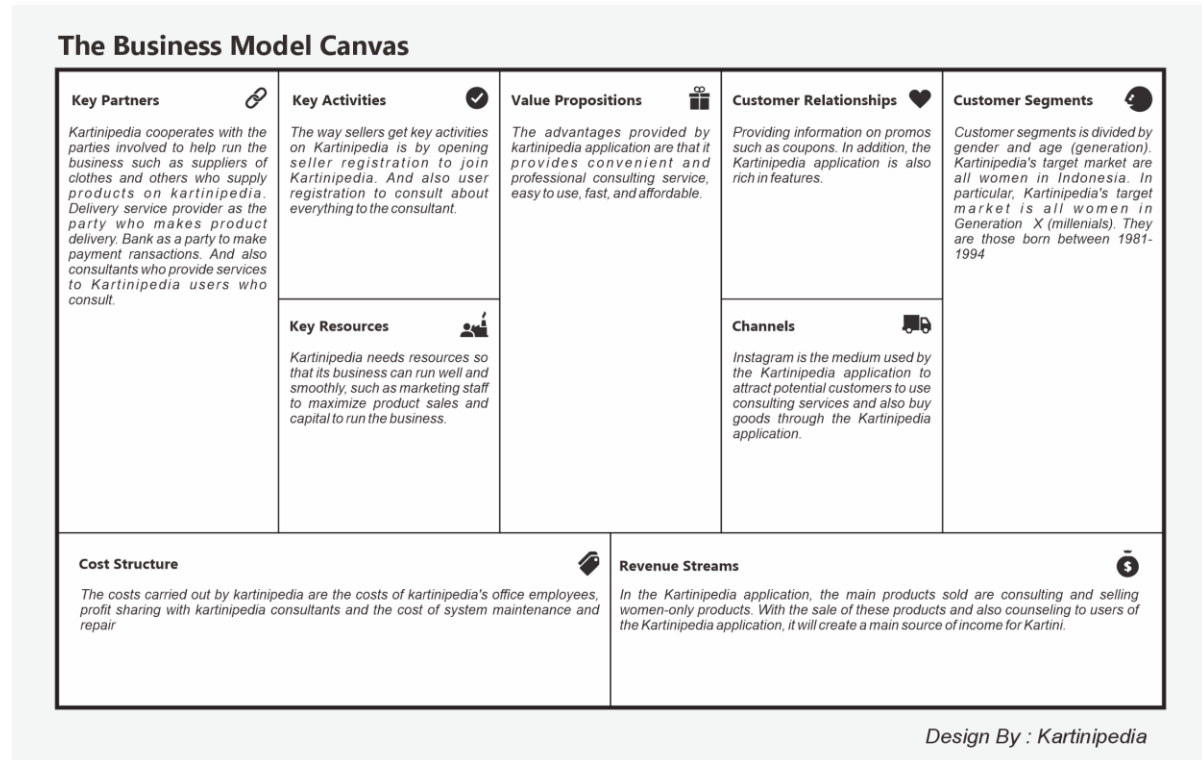## 3. Results and Discussion

Figure 3. Previous Kartinipedia's Business Model

Description of the business model on the Kartinipedia application using the Business Model Canvas (BMC) :

Customer Segments

According to Osterwalder and Pigneur (2010), customer segments are those who use the services/products of the organization and those who contribute to providing income for the organization (Alexander Osterwalder & Yves Pigneur, 2010). Customer Segment The Kartinipedia application is classified as Customer Segmented, which is directed to serve customers who are further classified based on their needs and problems. Market segmentation is divided by gender, age (generation), income level, and other related matters. In accordance with the purpose of the Kartinipedia application, the appropriate target market is all women, especially women in Indonesia with an age level that is in generation x (millennials). Baby boomers are not the target generation of Kartinipedia's market because of their limited ability to use internet technology.

In improving the Business Model Canvas (BMC), the author found several things that must be further detailed in determining customer segments so that Kartinipedia is divided into five segments. The first segment is the seller. The sellers in this case consist of housewives and female students. The purpose of this segment is for anyone who wants to earn additional income, expand their sales platform, and sell products that are women's needs.

The second segment is the buyer. Buyers are divided specifically to serve two customer segments, namely Housewives/Career Women and College Students. The Housewife/Women segment tends to be more capable of making luxury purchases and in large quantities because they already have their own income. The purpose of the housewife segment must be served with complete availability of goods including luxury goods. In addition, Kartinipedia must be

an easy-to-use platform to make it easier for housewives to access it. The second segment of buyers is students. This segment is considered to play a role in purchasing products on Kartinipedia even though it does not yet have its own income. A student can set aside his pocket money to buy the desired product. So that the consideration of cheap prices needs to be done by Kartinipedia to become a platform that this segment can glance at.

The fourth customer segment is a consultant. Consultants play an important role in running this application apart from being a place to sell products, but also as a provider of special consulting services for women. Consultants at Kartinipedia have several criteria that must be met, namely: female, have experience in the field they are engaged in, have academic abilities, are certified, can come from brand consultants (beauty, fashion, household, psychology, etc.). A consultant must have high dedication and integrity because it affects customer satisfaction and loyalty in the future.

The fifth customer segment is the client. Clients in this case relate to people who need solutions from consultants. Clients can consist of, women who have life problems, women who need consideration in choosing products or other similar things, and women who need friends to share with.

Value Proportions

Value proposition is a collection of products and services owned by the company so that it can provide more value to customers. (Alexander Osterwalder & Yves Pigneur, 2010). There are elements that can contribute to value creation, the Value Proposition given by Kartinipedia is convenience/usability, i.e. Making things more convenient or easier to use can create substantial value. The advantages provided by the Kartinipedia application are that it provides convenient and professional, easy, fast and affordable consulting services. This value proposition is considered too general and not yet detailed. In the refinement of BMC, the value proposition is detailed according to the number of segments in the customer segment.

The seller has a value proposition, Kartinipedia is here specifically for you housewives or students who want to get additional income. The value proposition for the housewife buyer segment is for housewives who want a marketplace platform that is convenient, complete, and easy to use, while also providing any consulting services related to women to help find solutions to the problems they face. The value proportion of student buyers, namely Karinipedia, forgets the platform to find items that are popular with teenagers at affordable prices and have many interesting promos. Value proposition for consultants, Kartinipedia helps women all over the world who have the ability and experience who want to share their knowledge with other women, interact with many women, of course, also earn additional income.

The value proposition for clients is that Kartinipedia is a friend for any woman who has any problems in life, needs a comfortable place to share, needs solutions to their problems.

Customer Relationships

Customer relationship is a company relationship with customers who use the company's products. There are several categories of customer relationships, including personal assistance, dedicated personal assistance, self-service, automated service, communities, and co-creation. The way the Kartinipedia application is to get new potential customers and retain

old customers to choose and buy products on the Kartinipedia application by providing promo information such as coupons. In addition, the Kartinipedia application is also rich in features. In improving the BMC Customer relationship, it can be described in general or in detail according to the customer segment. The way that Kartinipedia builds customer relationships with all segments in general is through social media and direct marketing. In other respects, he also has a deeper relationship with certain segments, namely conducting gatherings for consultants.

Channels
Channels are how companies communicate with customers so that they can produce a value proposition. Channels have five distinct stages, and each channel can cover some or all of the phases, and distinguish between direct and indirect channels, and between own and partner channels. An organization can choose between reaching customers through its own channels, through partner channels, or through a mixture of the two. (Alexander Osterwalder & Yves Pigneur, 2010). Instagram is the medium used by the Kartinipedia application to attract potential customers to use consulting services and also buy goods through the Kartinipedia application. Kartinipedia also uses user testimonials to attract trust from new users. Customer relationship is a company relationship with customers who use the company's products.

In improving BMC, the channel in question is the way the Kartinipedia company distributes products and services to reach buyers. The channel from Kartinipedia is freight forwarding expeditions. Expedition is used to physically deliver goods into the hands of customers. Without an expedition, business processes cannot run. The next channel is related to consulting services, namely the Kartinipedia application itself. This application is used by companies in delivering services provided by consultants to clients. In addition to the Kartinipedia application, other channels used to provide consultations can also be through social media using YouTube and TikTok to create content for consultants.

Revenue Streams
Revenue stream is revenue earned by the company in the form of cash received from customers Each revenue stream has a different pricing mechanism such as fixed price fixing, bargaining, auctions, depending on the market, depending on volume, or management of results. (Alexander Osterwalder & Yves Pigneur, 2010). In the previous business model in the Kartinipedia application, the main products sold were consulting and selling women-only products. With the sale of these products and also counseling for Kartinipedia application users, it will become a main source of income for Kartinipedia.

In improving the business model, Kartinipedia's revenue stream is divided into three broad lines, namely usage fees and advertising. Included in the usage fee is the percentage of product sales by sellers. In addition to product sales, other income is also obtained from the percentage of consulting services by consultants. Meanwhile, the second revenue stream is advertising, which is advertising services purchased by Kartinipedia for sellers who want to upgrade their stores so that they have a strategic place in the application. Another source of income obtained is adsense from other platforms.

Key Partners

Key Partnership is a network owned by a company that deals with suppliers of raw materials and business partners of the company so that they can make the business model work. Companies create alliances to optimize their business models, reduce risk, and acquire resources (Alexander Osterwalder & Yves Pigneur, 2010). Kartinipedia coorperates with the parties involved to help run the business such as suppliers of clothes, shirts, jacket, pants, bags, sandals, and other who supply products on kartinipedia. Delivery service provides as the party who makes product delivery. Bank as a party to make payment transactions, and also consultans who provide services to kartinipedia users who consult.

In improving the business model, Kartinipedia's key partners are not limited to this area. The new key partners include expeditions. Expeditions become a liaison or distribution channel so that a product from the seller can reach the hands of the buyer. Consultants and sellers, apart from being the customer segment, consultants and sellers are also partners so that the process can run. A payment gateway is a merchant service provided by an e-commerce application service provider that authorizes credit card or direct payment processing for e-business. Banks are directly related to financial affairs in the marketplace.

Key Activities

Key activities are activities that must be carried out by companies in making business models. Similar to key resources, key activities are required to create and offer value propositions, reach markets, maintain customer relationships, and generate revenue (Alexander Osterwalder & Yves Pigneur, 2010). The categories contained in the key activity are production, problem solving and platform/network. Kartini's key activities are included in the platform/network. As a network-dominated key resource associated with key activities. A network of platforms, software, and even brands can serve as platforms. In the key activity element, the previous analysis was not in accordance with the understanding.

In improving the business model, Kartini's key activities are divided into five activities, namely, marketing activities, integration activities by integrating the system with existing distribution channels so that companies also have access to ensure that a product has arrived in the hands of the customer. Banking activities by cooperating with the bank to expedite the payment process to matters relating to finance. Service/consultation activities are carried out by consultants who have been provided by the Kartinipedia application. This activity is one of the key activities because without service activities, Kartinipedia is just an ordinary online shopping platform with no added value as a comfortable place for women to share.

Key Resources

Key resources have another meaning, namely in the form of the most important assets needed by the company so that the business model can run well. Key Resources can be physical, financial, intellectual, or human. These Key Resources can be owned or leased by the company or acquired from a key partner. (Alexander Osterwalder & Yves Pigneur, 2010). The categories of key resources are physical, intellectual, human, and financial. Kartinipedia needs resources so that its business can run well and smoothly, such as marketing personnel to maximize product sales and capital to run its business.

In improving the business model, the main key resources in Kartinipedia are physical and human. Physical in this case is the application system and everything that supports its

sustainability. The next key resource is human. Kartinipedia needs human resources who can be relied on, always have brilliant ideas and are able to keep up with the times.

Cost Structure

The cost structure is all costs incurred by the company that are used to operate the business model. (Alexander Osterwalder & Yves Pigneur, 2010) The grouping of cost structures is divided into two classes, namely cost-driven and value-driven. Kartinipedia has a cost-driven cost structure that is more focused on value creation. Premium value proportions and a high degree of personal service are usually characteristics of a business model. After refining the business model, some of the cost structures are correct. However, there is also a cost structure that needs to be added, namely servers and office management. Meanwhile, what needs to be eliminated is the cost of consultant staff because it is not included in the cost structure. The cost structure for improving the business model is system development including software and other related matters, servers, human resources or employees and office management.
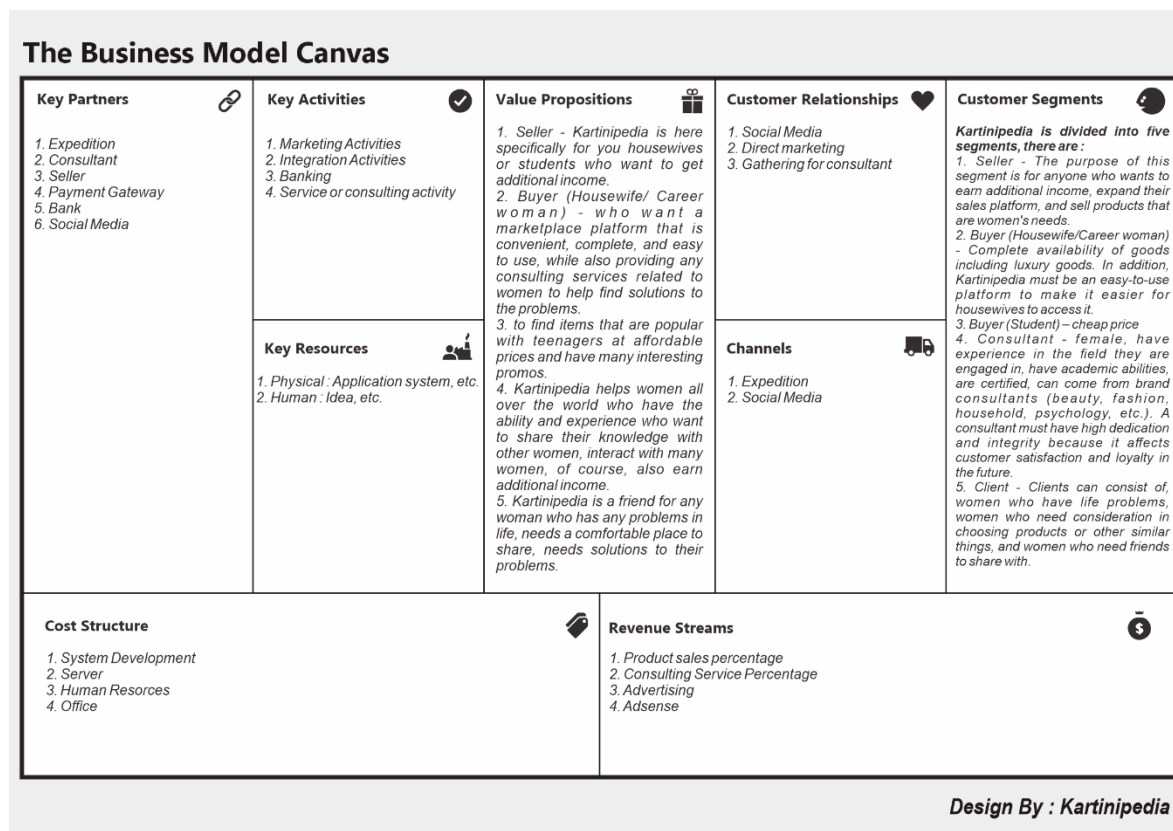

Figure 4. New Kartinipedia's Business Model

4. Conclusion

There are several conclusions that can be drawn from this research. Based on the test results from the usability scale system, getting a score of 67.83, it is necessary to do a business model analysis to get a new company strategy. The improvement of the Kartinipedia application business model was carried out using a nine-element business model canvas approach. Conclusions in this study include:

Based on the results of the analysis that has been carried out, the market segments that were originally still divided in general must be further detailed including sellers, buyers,

consultants, and clients. The value proposition, which was originally intended to be the same for all segments, now has specific criteria for each segment. Customer relationship was initially only aimed at promos, in new bmc it was expanded again through social media, direct marketing, and more specifically relationships with certain segments, namely gathering with consultants. The channel consists of expeditions, the Kartinipedia application as a consulting service, and other platforms for media content sharing by consultants.

Revenue Stream was initially only obtained through a percentage of the profit sharing from the sale of goods and consulting services, now the revenue stream comes from other sources, namely advertisements and adsense. Key partners initially only came from expeditions, banks, and consultants. In improving BMC, there are several parties who enter as key partners, namely sellers, payment gateways, and social media. Key activities in the old business model were limited to product sales, but in improving the new business model there were several key activities, namely marketing activities, integration activities between systems and distribution channels, banking, and service or consulting activities.

Key resource in the old business model is the marketing force. In the improvement of BMC, the key resource for the Kartini application is physical, namely the application system, and human, namely ideas that continue to develop. Based on the costs incurred in the Kartinipedia application, the cost structure comes from system development, servers, human resources, and office management. The suggestion that can be made by the kartinipedia application developer is to re-strategize according to the new business model canvas after testing through the system usability scale.

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